

‘Building Our Industrial Strategy’ Green Paper

Consultation Response - Goldsmiths, University of London

Consultation Questions

- 1. Does this document identify the right areas of focus: extending our strengths; closing the gaps; and making the UK one of the most competitive places to start or grow a business?**

We welcome the fact that the Green Paper rightly identifies universities as drivers of innovation and enterprise supporting industry. However, we feel the proposed strategy could do more to recognise higher education as an important UK industry in itself, particularly in relation to the value of both transnational education and the recruitment of international students to the UK. UK Higher Education is a very significant export in terms of the financial value as well as the value of the networks and relationships which are created which fuel future industry and innovation. Furthermore we believe that collaborations between higher education and the enterprise sector should be encouraged through all kinds of disciplinary research including arts, humanities and social science. We wish to emphasise the importance of bringing a diversity of research and creative thinking in order to create innovation in practices and methods as much as products and services.

- 2. Are the ten pillars suggested the right ones to tackle low productivity and unbalanced growth? If not, which areas are missing**

We agree that the ten pillars are the right ones. We welcome the commitment under pillar 1 to ‘invest in science, research and innovation to commercialise our world leading science base’ but would also emphasise the need for investment in our arts and social science base to support creative innovation and ensure our world leading creative industries sector continues to grow and scale up. We would welcome the opportunity to contribute to an evidence base of how we can build and sustain strong mutually advantageous relationships between research and business across the diversity of research disciplines. We believe that universities and business need to work together to evidence the importance of a diversity of research practice in higher education more generally.

- 3. Are the right central government and local institutions in place to deliver an effective industrial strategy? If not, how should they be reformed? Are the types of measures to strengthen local institutions set out here and below the right ones?**

As Local Economic Partnerships have grown in their role and responsibilities there is a continuing need to ensure that they join-up with other local institutions, including anchor institutions such as local authorities and local universities and colleges. We strongly believe in universities as agents for change, innovation and growth in their local environment. The size of the region in the London LEP area can prove challenging in terms of our sense of connection to the planning and operations of the London LEP where there is just one person from a University engaged in the decision making structure of the LEP in a region where there are over 40 HE providers. Where there is provision of business and innovation hubs within a locality we encourage providers and universities to work more closely together so that both benefit from strong connection to each other.

4. Are there important lessons we can learn from the industrial policies of other countries which are not reflected in these ten pillars.

NO ANSWER

5. What should be the priority areas for science, research and innovation investment?

We welcome the clear commitment to investment into science, research and innovation and the continuation of our dual support system that sustains the UK's world leading diversity of research practice.

Whilst we would agree that science, research and innovation investment is vital, we would want to emphasise our strong belief that to address the key challenges identified in the Green Paper, there needs to be a much stronger recognition of the 'STEAM' agenda which brings in research from the creative arts, humanities, social science as well as in entrepreneurial thinking and practice.

We also would like to see a greater emphasis on the importance of interdisciplinary research which can enable vital cross-fertilization of ideas that helps ensure the UK can sustain its reputation as world-leading in innovation.

Over the last decade, we have observed how a range of employers, including from the creative industries, are keen to employ graduates from our courses as they demonstrate a creatively driven approach to their professional discipline (from engineering through to management studies) are innovative, resilient and are able to adapt quickly to using new technologies in new settings.

We would like to see a greater emphasis on STEAM which offers an arts inspired approach to engineering education where students are encouraged to construct their own ontologies of understanding through an active process of creation.

We believe that the creative industries and future emerging industries will stay world-leading in the UK if we take a broad view of research and education. We need research and knowledge exchange activities across all of our disciplines to drive innovation and productivity in industry. The UK needs graduates who have the creative confidence and sensitivity to apply design, technology and engineering in groundbreaking, socially informed ways.

At Goldsmiths we have conducted our own empirical research comparing the effectiveness of traditional STEM style teaching compared to the more creative approach STEAM style teaching amongst Computing students. This research demonstrated that those students who had been taught to code using STEAM teaching and learning techniques were the students with higher levels of attainment. We would be happy to share this research with you.

<http://research.gold.ac.uk/20194/>

6. Which challenge areas should the Industrial Challenge Strategy Fund focus on to drive maximum economic impact?

Whilst the identification of the Eight Great Technologies initiative is helpful in terms of suggestions for potential Challenge areas, we also believe that there needs to be scope for proposals for investment in technologies which will drive innovation and growth in technologies to support the Creative Industries, this includes but is not limited to digital technologies.

We wish to see the creative industries recognised as a significant area for the Industrial Challenge Strategy Fund. The creative industries are a critical and growing part of our economy where the UK is truly world-leading. They are growing more quickly than finance and insurance, and by their very nature, are less prone to the dangers of automation. For example please see Nesta Report: Creativity Vs Robots, 2015:

<http://www.nesta.org.uk/publications/creativity-vs-robots>

In addition, we believe that increasing cultural engagement can help areas that are less economically affluent. We would like to see the importance of sustaining and growing cultural engagement as a key enabler of local economic growth more clearly recognised and supported within the industrial strategy to support rebalancing.

One of our key industry partnerships is with the investment company Ingenious who specialise in investment in the media industry and related infrastructure. We have learnt through our work with them and our own graduate entrepreneurs that a key vulnerability in the UK business start-up investment landscape is the appetite for risk. One significant intervention that Government could make is to provide investment and loan funding in high risk, high reward areas that the investment market is too risk averse to tolerate.

7. What else can the UK do to create an environment that supports the commercialisation of ideas?

Our experience of working with hundreds of start-up businesses tells us that collaboration is key to creating an environment that supports the commercialisation of ideas. Higher Education is already adept at collaborative activity but we think that the sector could be further supported and incentivised to collaborate and expand tech transfer activity. The infrastructure for collaboration and networking, especially at a local/regional level is vital to ensure that innovation and technology transfer reaches small to medium sized enterprises.

It is worth noting that much of the collaborative network has been enabled by EU funding streams over the last 20 years and would want the Government to consider how to support those collaborative networks in a post-Brexit environment.

Furthermore, it is important to recognise that technology per se is not the only solution in relation to the commercialisation of ideas. In relation to the Creative Industries, Fashion is a good example here. Technology might drive innovation in the materials used to make a dress, but it is not technology that drives why the dress is in demand. This exemplifies the importance of STEAM approaches to innovation and growth.

8. How can we best support the next generation of research leaders and entrepreneurs?

Self-employment will increasingly be a positive choice for many university students, particularly those working in the creative industries. At Goldsmiths almost 1 in 10 of our students are self employed within 6mths of graduating. Many of our graduates become freelance workers and have a much higher need for 'self-employment management skills' than traditional employee graduates. We prepare students to do this and equip them to transfer their creative and critical thinking and research skills in to entrepreneurial thinking or self-employability or skills as an entrepreneur.

In 2010, ICCE – The Goldsmiths' Institute for Creative and Cultural Entrepreneurship - launched SYNAPSE, a co-curricular workshop programme designed to enable students to explore and develop entrepreneurial tools to 'map their futures'. The Synapse model equips students with the skills to think about their future with the aim of enhancing graduate employability, as self employed, or with portfolio freelance careers.

HEIF funding in particular is absolutely critical to universities ability to provide the support and infrastructure required to support the next

generation of entrepreneurs. We welcome the proposal in the consultation to continue the support for the HEIF funding stream.

We would like to see an increase in Knowledge Transfer Partnerships where PhD students from all disciplines have the opportunity to work within companies. Moreover, we believe in the critical value of international research and partnership to drive originality, impact and innovation. Furthermore we believe that the next generation of research leaders and entrepreneurs will be people who have are social-informed, have the interpersonal skills to sustain practice within networks, a confidence in their own creative capacity, and a deep understanding of the role of technology. Again we believe that this can come from a STEAM approach to research and learning where the Arts, Humanities, Social Sciences and Entrepreneurship work in strong partnership with Science, Technology, Engineering and Maths.

9. How can we best support research and innovation strengths in local areas?

We believe the most effective way to support research and innovation strengths in local areas is to ensure that there is a connective infrastructure that encompasses the local university. Partnerships between industry and universities are the lifeblood of research and development. Productive partnerships are built up over many years of working together, there is a need for additional support to ensure that new businesses and emerging sectors are easily able to access support through their local university. For example, we have utilised external funding (often through EU sources) to create partnership and project opportunities with SMEs – this is especially vital in the creative industries – this has enabled SMEs to access support from our students, graduates and academics and build a longer lasting partnership that can be sustained when the external grant has reached the end of the funded period.

We expect the developments we are making in respect of degree apprenticeships to further strengthen the links we have with industry, and hope to broker new partnerships.

We believe that universities can play a critical role in supporting the development of systems of activity that catalyse regeneration which encompasses local government, local industry and also local cultural institutions to take a broader total ecology view of local regeneration.

We also believe that universities can provide opportunities and stimulate uptake of life-long learning opportunities. Both through distance learning but also providing affordable access to short courses on campus.

10. What more can we do to improve basic skills? How can we make a success of the new transition year should we change the way that those resitting basic qualifications study, to focus more on basic skills excellence?

Again we would like to see a broader view taken off skills to include creative-practice approaches to learning skills. That basic skills are learned not in isolation but in order to underpin creative activity. For example, in relation to numeracy and literacy there is often greater learning through doing; creative activity providing the motivation and environment to learn the skills within a practical context.

We also believe that with Brexit happening there should be an increase in language provision to ensure that the UK can sustain its position as one of the world's leading economies. e.g. (see 'The Costs to the UK of Language Deficiencies as a Barrier to UK Engagement in Exporting', UKTI, May 2014).

11. Do you agree with the different elements of the vision for the new technical education system set out here? Are there further lessons from other countries' systems?

We can see the need for a greater level of high quality vocational training. In increasing the volume of apprenticeships in the UK, we hope that attention is paid to the quality of those learning experiences and their effectiveness in securing on-going meaningful work opportunities for apprentices. We are currently developing degree-level and higher-level apprenticeships so that there is a high quality vocational route commensurate with academic study. It will be important for there to be a stable funding and policy landscape to support the efforts being made by both education providers and industry in relation to the development of the apprenticeship offer. It is not clear from the consultation document how the proposed Institutes for Apprenticeships will work with higher education providers; we would welcome inclusion and clarification.

We think it is critical that the next generation of entrepreneurs have a wide set of skills and so advocate a strong STEAM approach to technical education. Goldsmiths brings diversity and inclusivity in its approaches to research and teaching in coding across gender, socio-economic backgrounds, ethnicity, academic disciplines and internationally. The idea of teaching coding as a creative act was pioneered at Goldsmiths over ten years ago and it is now popular as STEAM education. This helps produce graduates, regardless of discipline to be well-suited to innovating technologies in the creative industries. We would be happy to be part of any government-led initiative that could take advantage of the experiences we have gained from teaching coding to non-engineers.

12. How can we make the application process for further education colleges and apprenticeships clearer and simpler, drawing lessons from the higher education sector?

We do believe that the application process would benefit from a centralised approach – this is what makes the UCAS system so successful for university applicants. There is clearly a need to make the system much more transparent and accessible to both employers and learners.

13. What skills shortages do we have or expect to have, in particular sectors or local areas, and how can we link the skills needs of industry to skills provision by educational institutions in local areas?

The Association of Graduate Recruiters Annual Survey for 2016 identified 9 key skills gap areas including ‘managing up’, dealing with conflict, negotiation skills, and commercial awareness, and our experience would concur with the need for Universities to enable graduates to develop these skills through both curricular and non-curricular experiences.

In addition, digital skills are an area of much vaunted skills need. However, in our experience this needs to be nuanced by an understanding of both the type of digital skills and the focus for the application of those skills. For example, we have a good relationship with doteveryone.org – an organisation that brings together designers, programmers, researchers, technologists and makers to focus on closing the gap in terms of the digital skill divide – our Creative Entrepreneurship academics and our Design students have worked with their teams to better understand and refine technology applications. We also see the need for more skills and knowledge in relation to emotional intelligence and ethics in relation to digital skills and technology. For example, one of our academics has worked closely with the Tech For Good organisation to help shape their programmes which consider how technology can be used to create greater impact in terms of social value and social capital.

We also want to underline the importance of interdisciplinary approaches to skill and knowledge development within the context of industrial innovation and emerging sectors. For example, our experience of running a range of short courses is that we get people from a range of different professional and industrial backgrounds who want to access courses such as ethnography, anthropology, and gender studies to enhance their understanding of the human condition and human behavior in relation to the application of new services and technologies. There is a risk to innovation through the separation of technology, science and the humanities.

Finally, it is vitally important that we do not look at skills shortages in a myopic way and retain the broadest approach to educational provision for skills and knowledge. In relation to development over the next 10-years – we may be looking at skills to sell services and products that don't yet exist. The pace of development, as well as the pace of utility in new developments, advances at an ever more rapid speed. One of the key skills that will be required to keep pace and maximize innovation and development in relation to productivity will be transformative leadership skills. Our Institute of Management Studies has experienced high demand by professionals for post-graduate programmes which equip them with the leadership and management skills that enable them to deal with transformation, change and uncertainty in the context of building organisations that are capable of constant service/product redesign and innovation.

14. How can we enable and encourage people to retrain and upskill throughout their working lives, particularly in places where industries are changing or declining? Are there particular sectors where this could be appropriate?

Universities are well placed to provide programmes of study that support people retraining and up-skilling throughout their working lives. We already do a significant amount of this. However, there has been an undoubted deterrent in the uptake of part-time learning (favoured mode for reskilling) in higher education in recent years where they have been significant changes to the funding landscape (tuition fees and ELQs) and we would welcome a fresh look at what interventions can be made to incentivise part-time learning. We also remain concerned about the longer term impact of the introduction of loans in the adult education and further education sectors.

We also believe that distance, online learning and MOOCs provide convenient and cost effective ways for people to keep their skills updated and fresh. We already provide a number of MOOC courses, which offer greater flexibility in terms of blended learning options and have a significant number of online learning enrolments.

15. Are there further actions we could take to support private investment in infrastructure?

NO ANSWER

16. How can local infrastructure needs be incorporated within national UK infrastructure policy most effectively?

We believe that this is best achieved through a clear local, sub-regional and regional planning structure. The LEPs clearly have a great

contribution to make but more effort will need to be put into local engagement and connectivity especially within the context of London.

17. What further actions can we take to improve the performance of infrastructure towards international benchmarks? How can government work with industry to ensure we have the skills and supply chain needed to deliver strategic infrastructure in the UK?
NO ANSWER

18. What are the most important causes of lower rates of fixed capital investment in the compared to other countries, and how can they be addressed?
NO ANSWER

19. What are the most important factors which constrain quoted companies and fund managers from making longer term investment decisions, and how can we best address these factors?
NO ANSWER

20. Given public sector investment already accounts for a large share of equity deals in some regions, how can we best catalyse uptake of equity capital outside the South East?
NO ANSWER

21. How can we drive the adoption of new funding opportunities like crowdfunding across the country?
NO ANSWER

22. What are the barriers faced by those businesses that have the potential to scale-up and achieve greater growth, and how can we address these barriers? Where are the outstanding examples of business networks for fast growing firms which we could learn from or spread?

The main factor in relation to scale up that we would highlight from our experience of working with SMEs is the investment environment and the toleration of risk. In short, businesses we work with find investors do not always have the appetite for risk to enable expansion and growth. The Government could supply innovators with investment options that the market won't provide, for example providing loans for start-ups.

It is also worth noting that within London small businesses can also struggle to find adequate premises that are affordable and have the space required for expansion.

Finally, small business owners often need support for their own leadership knowledge and skill development to ensure that are equipped and able to make decisions to support business growth. Many of the funded support programmes that have engaged with SMEs to deliver these skills have been through EU-funded business support; we hope that similar programmes of support can be funded directly by the UK Government in future.

23. Are there further steps that the Government can take to support innovation through public procurement?

NO ANSWER

24. What further steps can be taken to use public procurement to drive the industrial strategy in areas where government is the main client, such as healthcare and defence? Do we have the right institutions and policies in place in these sectors to exploit government's purchasing power to drive economic growth?

NO ANSWER

25. What can the Government do to improve our support for firms wanting to start exporting what can the Government do to improve support for firms in increasing their exports?

Education is a very significant British export. Trans-national education (TNE) where British institutions deliver programmes overseas, is a fast growing area and will require support to scale-up – the rewards for the UK are not only financial but also cultural and political. Often the programmes we deliver in-country are models where one or two years of study happens in the home country and the final year of study happens in the UK. Therefore, TNE cannot be divorced from consideration of the overall value of International students studying in the UK and we would strongly support removing international students from immigration statistics so that Universities can meet the strong demand from international students for education services both here in the UK and as an export to overseas countries.

Finally we would very much welcome a stronger working relationship between the British Council, trade delegations and HEIs working together. Whilst universities have been included in some trade delegation trips, we do believe that this should become a more routine consideration.

26. What can we learn from other countries to improve our support for inward investment and how we measure its success? Should

we put more emphasis on measuring the impact of Foreign Direct Investment (FDI) on growth?

NO ANSWER

27. What are the most important steps the Government should take to limit energy costs over the long-term?

Sectors need to be supported to come up with their own sustainability solutions. We believe the creative and cultural industries can provide innovative new approaches to energy costs. The Arcola theatre aims to be the world's first carbon neutral theatre. Within our own sector, the HEFCE has its own sustainable development framework initiative to support and guide universities in terms of sustainable growth and development.

We need to ensure that an infrastructure is in place to share good practice and innovation across different sectors.

28. How can we move towards a position in which energy is supplied by competitive markets without the requirement for on-going subsidy?

NO ANSWER

29. How can the Government, business and researchers work together to develop the competitive opportunities from innovation in energy and our existing industrial strengths?

Again we think a diversity of thinking (STEAM) is key and ensuring that we don't just look for sectorial solutions within those sectors alone.

30. How can the Government support businesses in realising cost savings through greater resource and energy efficiency

NO ANSWER

31. How can the Government and industry help sectors come together to identify the opportunities for a 'sector deal' to address – especially where industries are fragmented or not well defined

There needs to be an engagement strategy before a sector deal. Industries have different landscapes – Creative Industries is particularly fragmented – ecology of small to medium firms offering specialised services – the challenge of engaging means that there is more need for a sector deal, so the challenge does need to be addressed and met. Organisations such as the Creative Industries Federation are well placed in our view to contribute to that engagement.

We welcome the appointment of Sir Peter Bazalgette to lead the independent review of how the Creative Industries can help underpin our future prosperity and will work with him to provide ideas. We recognise that the creative industries is an extremely different sector from other sectors and so it is critical that we do not look for a one size fits all solution. The creative industries are well known for being an ecosystem that relies on the sustainability of a wide range of very small companies.

Please see recent report:

http://www.thecreativeindustries.co.uk/media/243587/cic_report_final-hi-res-.pdf

Any future sector deal may need to consist of distinct but mutually coherent initiatives.

**32. How can the Government ensure that ‘sector deals’ promote competition and incorporate the interests of new entrants?
NO ANSWER**

33. How can the Government and industry collaborate to enable growth in new sectors of the future that emerge around new technologies and new business models?

Any collaboration between Government and industry to enable growth in new sectors must include universities – they are best placed to be a hub for innovation, especially within the context of local growth strategies.

**34. Do you agree the principles set out above are the right ones? If not what is missing?
NO ANSWER**

35. What are the most important new approaches to raising skill levels in areas where they are lower? Where could investments in connectivity or innovation do most to help encourage growth across the country?

Universities are crucial to the ability to raise skill levels in areas where they are comparatively low or out of step with regional industry demands. Partnership working with other education providers, especially FE Colleges, is crucial to ensure that there is a ladder of learning opportunities accessible in all localities.

36. Recognising the need for local initiative and leadership, how should we best work with local areas to create and strengthen key local institutions?

As previously commented, the London LEP needs to develop a sub-regional structure to underpin better connection with the university sector and other partners in local areas.

37. What are the most important institutions which we need to upgrade or support to back growth in particular areas?

Local business support networks, business clusters and innovation hubs are vital to sustaining a healthy ecology of SMEs – we are concerned as to how these will be affected by the withdrawal from the EU and their many funded programmes of business support. We would also note that the overall reduction in funding for Local Authorities has limited the extent to which they will be able to sustain support for business development in the future. In this uncertain environment we believe universities are very well placed to be the hubs of support within local communities and would be an effective and efficient channel for any future new funding or business support infrastructure.

38. Are there institutions missing in certain areas which we could help create or strengthen to support local growth?

As previously commented; the London LEP would benefit from a clear sub-regional structure and greater transparency, accountability and openness.

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